ÖAW AUSTRIAN ACADEMY OF SCIENCES

MYCENAEAN AND HOMERIC SOCIETIES
ARCHAEOLOGY AND TEXT
Collected Papers of
SIGRID DEGER-JALKOTZY
edited by Birgitta Eder and Ulrike Schuh
https://epub.oeaw.ac.at/Sigrid_Jalkotzy-Deger

OREA Institute for Oriental and European Archaeology

53.

S. Deger-Jalkotzy

Work in Progress: Report on the End of the Mycenaean Civilization Project for the years of 1999–2001

in: M. Bietak (ed.), The Synchronisation of Civilisations in the Eastern Mediterranean in the Second Millennium B.C. II. Proceedings of the SCIEM 2000 – EuroConference, Haindorf, 2nd of May – 7th of May 2001, Contributions to the Chronology of the Eastern Mediterranean 4 = Österreichische Akademie der Wissenschaften Denkschriften der Gesamtakademie 29 (Vienna 2003) 455–470

Manfred Bietak (Ed.)

The Synchronisation of Civilisations in the Eastern Mediterranean in the Second Millennium B.C. II

Proceedings of the SCIEM 2000 – EuroConference, Haindorf
2nd of May – 7th of May 2001

Verlag der
Österreichischen Akademie
der Wissenschaften

Vorgelegt von w. M. Manfred Bietak in der Sitzung am 21. Juni 2002

Gedruckt mit Unterstützung der European Commission, High-level Scientific Conferences
www.cordis.lu/improving/conferences

Spezialforschungsbereich SCIEM 2000
„Die Synchronisierung der Hochkulturen im östlichen Mittelmeerraum
im 2. Jahrtausend v. Chr."
der Österreichischen Akademie der Wissenschaften
beim Fonds zur Förderung
der wissenschaftlichen Forschung.

Special Research Programme SCIEM 2000
„The Synchronisation of Civilisations in the Eastern Mediterranean
in the Second Millennium B.C."
of the Austrian Academy of Sciences at the Austrian Science Fund

British Library Cataloguing in Publication data.

A Catalogue record of this book is available from the British Library.

ISBN 3-7001-3176-3

Österreichische Akademie der Wissenschaften
Wien
Grafik, Satz, Layout: Angela Schwab
Druck: Druckerei Ferdinand Berger & Söhne GesmbH, Horn
Printed and bound in Austria

Contents

Work in Progress: Report on the "End of the Mycenaean Civilization" Project for the Years of 1999–2001*

*Sigrid Deger-Jalkotzy***

The "End of the Mycenaean Civilization" Project concentrates on the chronology and synchronisms of the period which followed after the collapse of the Mycenaean palaces. This postpalatial period (12th–first half of 11th centuries B.C., in archaeological terms Late Helladic [LH] III C) was still Mycenaean in character. It was, however, an illiterate age, lacking in the higher arts, crafts, intellectual achievements together with the complex systems of social and political organization which had marked the Mycenaean palace period. On the other hand LH III C was one of the most interesting periods of Greek history as it brought about the transition from the Late Bronze Age to the Early Iron Age of Greece, as well as the gradual transformation of the Mycenaean cultural heritage into a constituent part of the classical civilization of Greece. It is therefore worth the while to attempt investigating the cultural and historical developments from the advanced civilization of the Mycenaean palaces to the rise of the Protogeometric era.

However, the chronology – the backbone of historical research – of LH III C is still a matter of scholarly dispute. One of the shortcomings of the postpalatial period was the decline of the far distance trade relations which the Mycenaean palaces had entertained with the political powers of the Near East and with Egypt. Research into the history of the period is therefore hampered by the absence of contemporaneous oriental objects in LH III C contexts which could be used for the purposes of cross-dating and absolute chronology. Radiocarbon data, too, have so far been notoriously rare. Under these premises the relative chronology of LH III C rests upon the typological and stylistic evolution of the pottery found in settlements and burial sites. Until now three different chronological schemes have been proposed of three,[1] four[2] and five (Rutter 1977) subdivisions. Of these the tripartite phasing has become more widely known because it is used by Mountjoy 1986, the most influential reference book on Mycenaean pottery classification.[3] Attempts to harmonize the three schemes have so far not arrived at a general consent[4] because the LH III C pottery developments of the Aegean display a great deal of regional variation. It is therefore difficult to recognize a general evolution of LH III C pottery styles which could be translated into a satisfactory chronological system. Moreover large amounts of LH III C material still await publication. It is no exaggeration to say that a major desideratum of research into the early history of the Aegean consists in the publication of excavated LH III C sites which could offer a broader basis of material for chronological studies.

The "End of the Mycenaean Civilization" project therefore aims at *two objectives*:

* Acknowledgements: Many thanks are due to Doz. Dr. Eva Alram-Stern for her longterm and faithful cooperation, as well as for many fruitful discussions. I would also like to thank Dr. Michaela Zavadil for her support with the reinvestigation of HBW, and Mag. Nicola Nightingale for checking the English text. Ink drawings were made by Edith Held (Salzburg), photographs by K. V. van Eickstedt (Athens).

** Vienna - Salzburg

1 The tripartite scheme of LH III C Early, Middle and Late which ultimately goes back to A. Furumark's subdivision of LH III C:1a, III C:1b, and III C:1c (Furumark 1941) was first suggested by French 1969. As it appeared to be supported by the three phases of the burial sequence at Perati (Iacovides 1969–70), as well as by the stratigraphy of Lefkandi (Popham - Milburn 1971), it was adopted by Schachermeyr 1980 and particularly by Mountjoy 1986.

2 Mycenae and Tiryns have become a kind of reference sites for LH III C chronology because their stratified levels represented a complete habitation sequence of the entire period. For both sites it has been claimed that a four-partite scheme of LH III C Early, Developed, Advanced and Late seems better to reflect the period's settlement sequence and developments of pottery style (Podzuweit 1983, 1988; Iacovides 2003).

3 See, however, the cautionary remarks of French 1998 as to the aptitude of subdividing LH III C into three subperiods.

4 Even at the single site of Tiryns the German excavators had difficulties to agree between themselves on the phasing of the habitation levels of the Unterburg, cf. Podzuweit 1983, 1988, *versus* Kilian 1988, 107 and Papadimitriou 1988 on LH III C Advanced, Late, and Submycenaean.

I.

It firstly aims at the promotion of a relative chronological system of LH III C which can be applied to all regions where LH III C cultural phenomena became apparent: the Greek Mainland, the islands, Late Minoan [LM] III C, Late Cypriot III A Cyprus, and – in a wider sense – the Philistia and Italy. A chronological system of this kind has to start from correlating the pottery developments of the various Aegean regions after the fall of the Mycenaean palaces. These synchronisms will not only provide a diachronic framework for studies into the history of the post-palatial period of Greece. It will also help to understand the interrelations between the Aegean, Cyprus, the Central and the Eastern Mediterranean during the 12th and 11th centuries B. C.

II.

The second objective is the publication of new LH III C material. For this reason the *Aigeira publication project* was included in the "End of the Mycenaean Civilization" project. Aigeira is situated in the province of Achaia and near the border between Achaia and Corinthia. Within the modern community of Aigeira a precipitous hill rises from the coast of the Corinthian gulf up to 400 metres above sea level. It is covered by the ruins of the Hellenistic and Roman town excavated by the Austrian Archaeological Institute. During the years of 1975 to 1981 a small Mycenaean LH III C settlement was excavated on the plateau on top of the hill under the direction of Prof. Wilhelm Alzinger (for a description of the site and a preliminary report on the Mycenaean evidence see DEGER-JALKOTZY and ALRAM-STERN 1985; see also E. ALRAM-STERN in this volume). A first preliminary report was published in 1985 (ALZINGER *und Mitarbeiter* 1985).

It should be noted that LH III C Aigeira was not a large settlement; nor was it a centre of importance. The scientific value of the site lies in the fact that it has yielded a settlement stratigraphy of LH III C. Despite abundant finds which testify to the extraordinary wealth of Achaia during LH III C, the chronology of the region during that period has remained an unsolved problem. This is even more regrettable since during the LH III C period Achaia reached a pinnacle of economic and cultural achievements. However, synchronisations with other regions of the Aegean are rendered difficult by the stylistic idiosyncrasies of Achaian pottery products. Most of the material originates from tombs, of which only a few stratified deposits have been published (PAPAZOGLOU-MANIOUDAKI 1994). Stratified evidence from the few settlements which have been excavated so far has widely remained unpublished.[5] As has been said, the publication of the LH III C settlement of Aigeira will therefore present the first stratified habitation deposits and a starting point for studies into the LH III C chronology of the NW Peloponnese.

As for the first objective of the "End of the Mycenaean civilization project", a national seminar was held on June 2nd, 2000 at the SCIEM 2000 Institute. Discussions concentrated on the present state of research and how this part of the project can be organized on an international level. The key lecture was given by Professor SPYROS IACOVIDES on the diachronic dimensions of the LH III C cemetery excavated by himself at Perati in East Attica, as well as on the evidence of widespread intraregional and overseas connections which he found at this site. In the course of the seminar it soon became clear that, first of all, the question of LH III C synchronisms within the regions of the Aegean needs to be clarified. It is only at a second stage that the synchronisms between the Aegean, Cyprus, the Levant, Italy and the northern periphery can be approached. This decision has now been justified by Dr. P. A. MOUNTJOY's extensive study on Mycenaean pottery regionalism which came out while SCIEM 2000 was already under way. In this book a new system of synchronisms was proposed for LH III C which revises the chronology of several sites (MOUNTJOY 1999a: 38–58 and table II).

I.a

On May 7–8, 2001 an International *Workshop* on *"LH III C Chronology and Synchronisms"* was held at the Austrian Academy of Sciences at Vienna. It brought together excavators of LH III C sites on the Greek

[5] Apart from Aigeira, LH III C settlements were excavated at Katarraktis-Drakotrypa, Chalandritsa-Stavros, Teichos Dymaion. Other settlement sites have been located on the basis of surface finds. For a recent synopsis of Mycenaean sites in Achaia see KOLONAS 1998; for Chalandritsa-Drakotrypa KOLONAS 1998, 482; for Katarraktis-Drakotrypa and Teichos Dymaion PAPADOPOULOS 1979, 30, 24 (with bibliography). The new settlement site at Patras-Pagona may have lasted into LH III C, but material study has to be awaited (kind information by Mrs. STAVROPOULOU-GATSI, Patras).

mainland, Crete and the Cyclades, and scholars who have been studying and publishing recent evidence from new sites or unpublished material from old excavations. Papers were presented on the pottery chronology and synchronical aspects of 12th/11th centuries sites of the Peloponnese, of Attica, Central and Northern Greece, of the Aegean islands and LM III C Crete.[6] Discussions concentrated on various questions like (*inter alia*) the initial stages of LH III C; the utility or non-utility of introducing a „transitional" phase between LH III B 2 and LH III C; a definition of the beginning of LM III C on Crete; synchronisms between the Mainland and Crete; cultural survivals and cultural novelties. The publication of the proceedings of the workshop is scheduled for 2003.

I.b

Further workshops are planned for the years of 2002 until 2005. The first workshop on *"12th and 11th centuries B.C. chronology and synchronisms between the Aegean, Cyprus and the Levant"* will deal with the character, the origins and the chronological setting of the Aegean impact upon the LC III A culture of Cyprus and upon the culture of the Philistines. - The second workshop will focus on *"LH III C Middle and Late; LH III C Late versus Submycenaean"*. LH III C Middle was a most prosperous phase which saw a great deal of intercommunication within the Aegean. However, on the basis of current definitions of regional pottery styles some regions like Achaia, Arcadia or Central Greece would have reached their pinnacle not in LH III C Middle but in LH III C Late. It is obvious that this issue has a great bearing upon the studies of the synchronisms and ultimately of the historical aspects of LH III C. A similar problem consists in the definition of LH III C Late against Submycenaean. Towards the close of the Mycenaean era the pottery of the western Peloponnese and of central and northern Greece does not appear as having had much in common with the Submycenaean types and decorative patterns of Attica and Euboea. Synchronisms of the final stages of Mycenaean civilization in the Aegean therefore constitute a much disputed issue. – The third workshop *"Synchronisms between the Aegean, Cyprus, the Levant and Italy"* will discuss the chronology of the interrelations within the Aegean, and between the Aegean and prehistoric Italy which appear to have been particularly lively during LH III C. A comparison between the western and the eastern connections of the Aegean should also yield some interesting aspects.

II.

As far as the second aim of the "End of the Mycenaean Civilization" project is concerned, it had been planned from the outset that during the first stage, i. e. during the years of 1999 to 2001, emphasis should be placed upon the *Aigeira publication project.* As has been already mentioned, a preliminary report on the excavations of the LH III C settlement of Aigeira was published in 1985 (Alzinger und Mitarbeiter 1985), and several other publications have dealt with various aspects and the chronology of the find material.[7] After 1985 material study was interrupted for various reasons.

In 1999 work was resumed within the framework of SCIEM 2000. The following points of the work schedule for 1999 to 2001 have been carried out:

II.1.

Mycenaean pottery study. Drawings, descriptions and a catalogue of the material from the northern central part of the settlement on the plateau on top of the hill had already been completed between 1995 and 1998 with the financial support of INSTAP. Within

---

[6] Program: Sp. Iacovides, LH III C at Mycenae. K. Dimakopoulou, The Pottery from the Destruction Levels at Midea: LH III B 2 Late or Transitional LH III B 2/LH III C Early? U. Damm-Meinhardt, Evidence of Stratigraphy at the Beginning of LH III C from the Lower Citadel of Tiryns. Sp. Iacovides, LH III C at Perati. W. Gauss, Late Mycenaean Pottery from the North-Slope of the Acropolis of Athens. F. Ruppenstein, LH III C vs. Submycenaean. A Methodological Problem. J. Rutter, What Do the Minoan Elements in the Attic Mycenaean Pottery ca. 1225–1150 signify? B. Hallager, LM III B 2 and LM III C Pottery in Khania. A. Kanta, A. Karetsou, The Citadel of Kastrokephala and its Pottery. A. Kanta, 12th Century Stratified Pottery Groups from Crete. A. Karetsou, The 12th Century Pottery from the Peak Sanctuary from Juktas. A.-L. D'Agata, LM III C-SM Pottery Sequence at Thronos/Kephala and its Connections with the Greek Mainland. R. Jung, LH III C at Kastanas and Ay. Mamas. F. Dakoronia, The Transition from LH III C to the Early Iron Age at Kynos. E. Alram -Stern, The LH III C Stratigraphy of Aigeira/Achaia. S. Deger-Jalkotzy, The LH III Pottery Chronology of Aigeira/Achaia. A. Vlachopoulos, The LH III C Pottery of Naxos and the Cyclades. A. Yasur Landau, New Developments in the Absolute Chronology of LH III C. A View from the Levant.

[7] See bibliographies S. Deger-Jalkotzy and E. Alram-Stern in this volume.

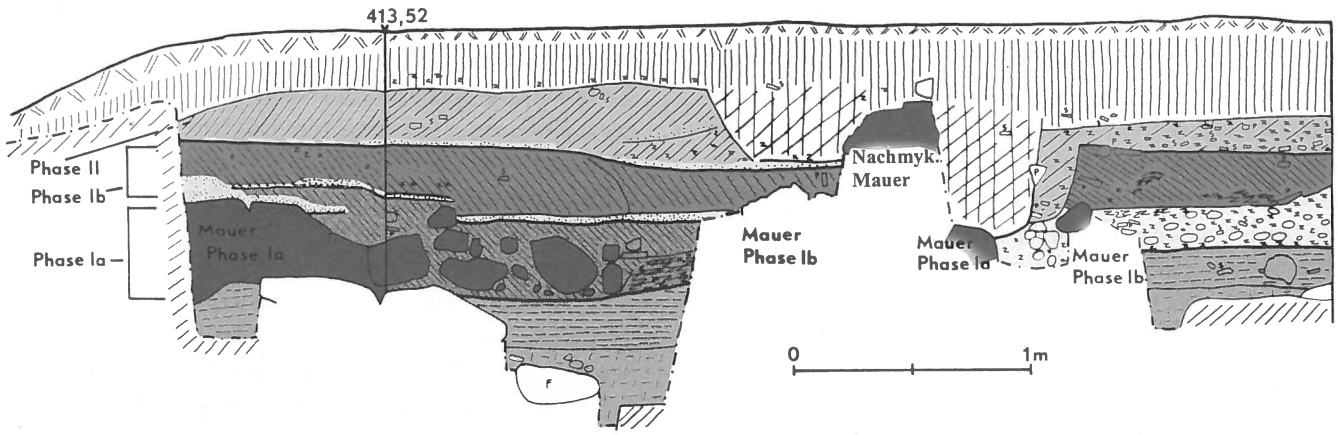

Fig. 1 Aigeira acropolis, stratigraphy: PQ III 3 west-profile. Drawing: E. Alram-Stern, Chr. Schauer. Graphics: E. Held

the framework of SCIEM 2000 material study was therefore continued with analogous work on pottery finds from the southern central and the eastern part of the settlement. This work will be continued and completed during the subsequent stage of SCIEM 2000 between 2002 and 2005.

The stratigraphical observations which we published in 1985 (Deger-Jalkotzy and Alram-Stern 1985) have been confirmed by Doz. Dr. Alram Stern's recent studies on the stratigraphy and the architectural remains of the site.[8] The pottery finds suggest that the plateau on top of the settlement hill of Aigeira was inhabited until the end of the Mycenaean period (Deger-Jalkotzy and Alram-Stern 1985, 422f. ; Deger-Jalkotzy 1991: 27f. and Abb. 2). However, pottery of LH III C Late was not found in stratified contexts because those strata had been destroyed by post-Mycenaean building activities and by the modern agricultural use of the site so that only the lowest Mycenaean levels were preserved (Fig. 1). At various locations of the site a layer of topsoil was found underneath the first Mycenaean floor, and the rock fissures had also been filled with soil. These layers and fills contained prehistoric pottery and Handmade Burnished Ware, see below II.2. Above these fillings or directly above the natural bedrock three Mycenaean settlement layers were identified. The two lowest strata exhibited the same orientation of settlement plan and the same pottery types so that they may be viewed as two phases of one settlement period (Phase I a and I b). They were overlaid by the third stratum which represented a different settlement period and which was therefore called Phase II. The layers above Phase II were unstratified. They contained LH III C Late, Early Iron Age, Archaic (Deger-Jalkotzy 1991; Schwarz 1986), as well as Hellenistic and Roman finds. Archaic and Classical material was mainly found in the fill of a cistern (Schwarz 2001). At some locations the stratum of Phase II was not clearly separated from the top layers and the pottery deposits were mixed. All three phases I a, I b and Phase II were destroyed by conflagrations. The destruction debris of Phase I b had a thickness of about 50 cm and contained a great amount of find material.

Within SCIEM 2000 our main interest was focussed on the pottery chronology. Particular efforts were made to single out some stratified and unmixed pottery deposits of all three settlement phases. Some of this pottery is shown in Fig. 2. In 1985 the chronology of Phase I a and b was defined as LH III C Early, while the pottery of Phase II was classified as LH III C Middle (Deger-Jalkotzy and Alram-Stern 1985: 411–426). Meanwhile the international state of research into Mycenaean pottery has been enriched by publications of new finds and material studies. A reinvestigation of the classification and chronology of the Aigeira material was also suggested by the fact that our dating of Phase II has been recently doubted. According to P. A. Mountjoy it has to be dated in LH III C Late (Mountjoy 1999a: 399). Since the same authoress agrees with our LH III C Early chronology for Phase I a and b, she postulates a settlement hiatus between Phase I b and Phase II. However, the stratigraphy of Aigeira does not comply with this proposition. All over the settle-

[8] Cf. above fn. 6.

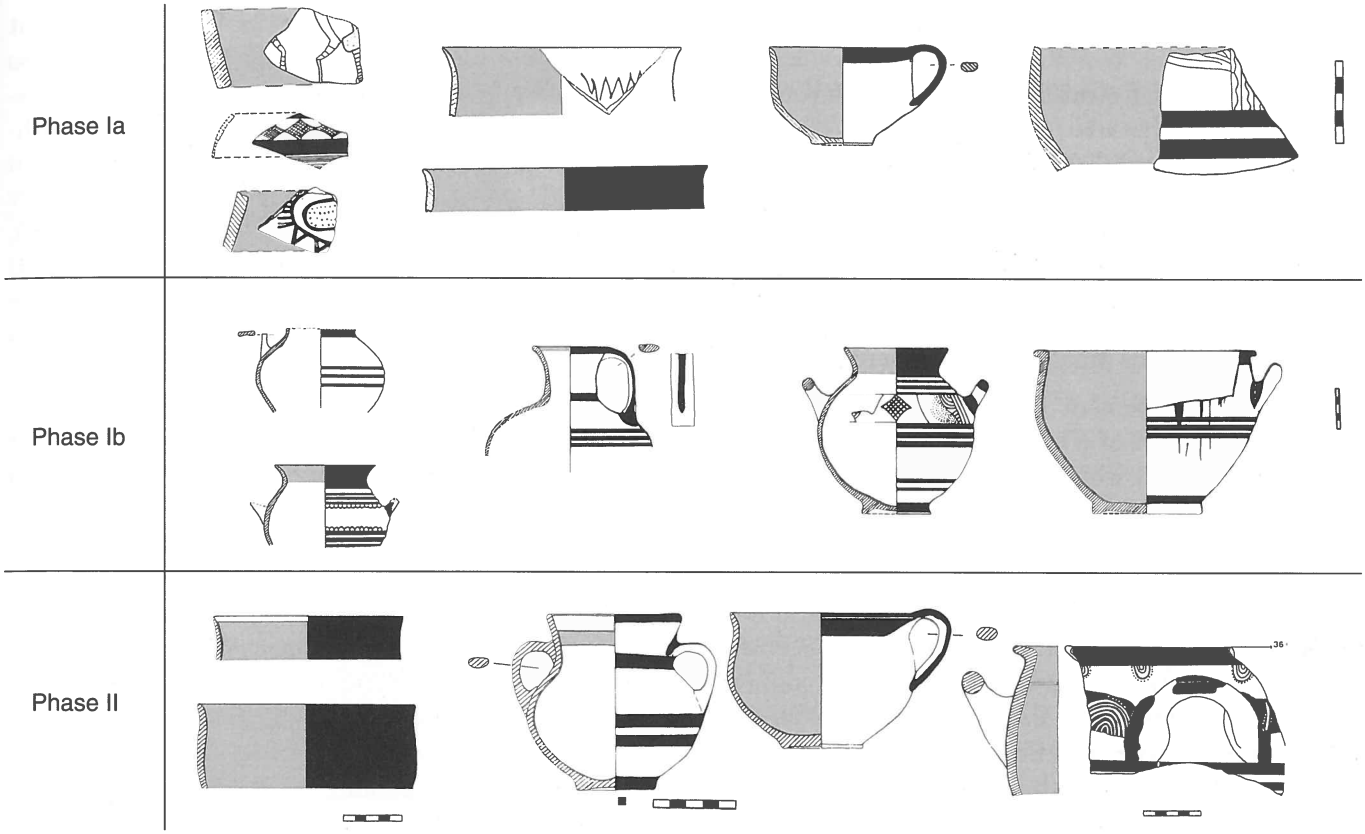

Fig. 2 Aigeira acropolis: Examples of LH III C Mycenaean pottery from stratified deposits
Drawings: E. Alram-Stern, K. Schodl. Graphics: E. Held

ment plateau the thick, burnt destruction layer of Phase I b was immediately overlaid by the characteristical grey and ashy layer of Phase II. At no point was humus soil found between the two strata (see here Fig. 1, and E. Alram-Stern in this volume, fig. 6). A call for a date of Phase II in LH III C Late would therefore imply that every inch of humus accumulated during the alleged settlement hiatus had been removed by the builders of Phase II until the destruction layer of Phase I b was reached. Although we do not close our minds to such a hypothesis we do not think that it is very probable, particularly since pottery of LH III C Late was found in the unstratified layers between the surface and the three Mycenaean strata. But there is perhaps a different approach to the problem. In our 1985 report Aigeira Phase I a and I b were correlated to the settlement phase I b of Lefkandi (Euboea) and to the pottery found on Floor 2 of House P at Korakou in the Corinthia (Deger-Jalkotzy and Alram-Stern 1985. For Lefkandi cf. Popham and Milburn 1971; for Korakou Rutter 1974: 538–542). P.A. Mountjoy now holds that Lefkandi I b lasted from LH III C Early well into III C Middle/Developed (Mountjoy 1999a: 38 and table II). If the chronology of Aigeira I b needs to be redated accordingly, the chronology of Phase II would drop to LH III C Middle/Advanced. Unfortunately the ^{14}C dates do not help to solve this matter (below II.4.4). But, as we have already mentioned, the tripartite chronological scheme does not seem to apply to all Aegean regions of LH III C (see above I.b). Particularly the definition of LH III C Middle versus LH III C Late is far from being clear. It is, indeed, possible that LH III C Middle/Advanced also comprised an early stage of what is now classified as LH III C Late: According to Podzuweit 1988 at least at Tiryns the stylistic affinities between the pottery of III C Advanced and III C Late were stronger than those between LH III C Developed and Advanced.[9] It may be hoped that the second workshop on LH III C chronology (see above, I.b) will achieve some progress on these matters.

[9] Podzuweit therefore prefered the four-partite phasing of LH III C, see above fn. 2.

At the 2001 workshop on "LH III C Chronology and Synchronisms" (see above, I.a) S. Deger-Jalkotzy presented some well stratified deposits which could be singled out from the central part of the plateau where the clearest picture of the Mycenaean habitation was exhibited.[10] However, as a fair number of deposits still wait to be investigated, the final judgement on the chronology of the three Mycenaean habitation levels at Aigeira has to be suspended.

II.2 The Handmade Burnished Pottery of LH III C

The levels of settlement Phase I at Aigeira yielded pots and fragments of a handmade pottery class with burnished surfaces which greatly contrasts with the wheel-made Mycenaean wares (Figs. 3–6). It was christened "Handmade Burnished Ware" (henceforth: HBW) by J. B. Rutter 1975, while it was called "Barbarian" by F. Schachermeyr 1980 and others. The co-existence of Mycenaean pottery and HBW in habitation levels of the early 12th century has also been attested at many other sites in Greece and even in Cyprus (Pilides 1994). In Crete HBW was found in earlier contexts of LM III A 2 and LM III B (for a summary on Khania and Kommos see Pilides 1994, 28–30).

It was J.B. Rutter who first recognized the significance and the historical implications of HBW (Rutter 1975). Due to his publication we immediately understood what we were dealing with when we first encountered HBW at Aigeira in 1975. However, it soon became clear that the deposits of Aigeira also contained pottery of earlier periods of Greek prehistory. In our first reports we referred to Late Neolithic sherds and to pottery fragments which were then classified as Early Helladic II (Deger-Jalkotzy 1977; Deger-Jalkotzy and Alram-Stern 1985, 395f.). We also reported that this prehistoric material was found not only in the LH III C levels: Below the first LH III C Mycenaean stratum an earlier layer was found which contained pre-historic pottery and HBW but no Mycenaean wares.[11] In the northwestern part of the plateau there was even a small stretch of a floor which we assigned to this level (see Alram-Stern in this volume, Fig. 6: PQ II 2, "pre-Mycenaean level"). We therefore concluded that the producers of HBW had already settled on the "acropolis" of Aigeira before the Mycenaeans occupied the site in LH III C. This view seemed to be supported by the synchronism of the first building phase of Aigeira with the LH III C site of Lefkandi I b in Euboea which could suggest that Aigeira was founded considerably later than the very beginning of LH III C (Deger-Jalkotzy 1977; Deger-Jalkotzy and Alram-Stern 1985, 395f.). However, this interpretation was challenged by J.B. Rutter. He suggested that what we then called the "HBW level" of the settlement was, in fact, a mixed layer of Neolithic, Early Helladic (EH) and Middle Helladic (MH) material (Rutter 1990).

Fig. 3 HBW jug E 65/78 (left), two-handled jar A 153/76 (right). Photograph: Th. Römer

[10] Above fn. 6.

[11] See above p. 458.

Fig. 4 Fragment of HBW jug A 173/78
Photogr.: K. V. von Eickstedt

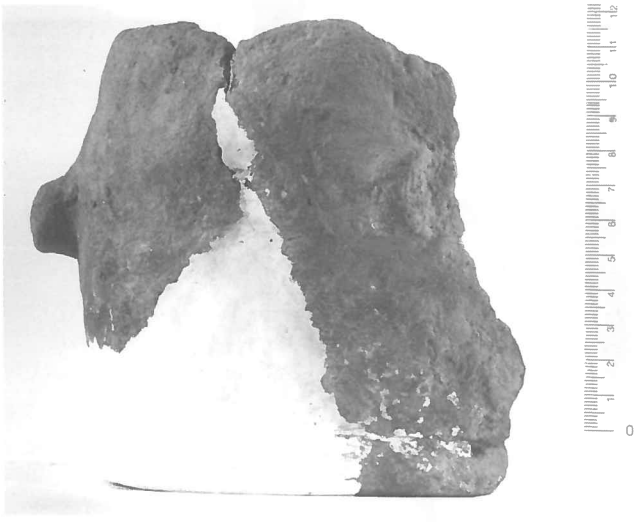

Fig. 5 HBW jar AKM 1602/75
Photogr.: K. V. von Eickstedt

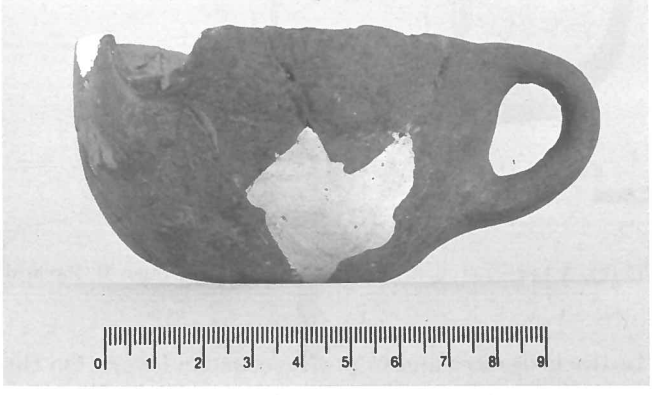

Fig. 6 HBW spouted cup A 295/80
Photogr.: K. V. von Eickstedt

Since our reports were written much more Neolithic and EH pottery has been published. More MH pottery, too, has become known.[12] Moreover Eva Alram-Stern has become a renowned specialist on Neolithic pottery and is now working on her second volume of the second series of "Ägäische Frühzeit" which will be dedicated to EH Greece. It was therefore natural that during the first stage of SCIEM 2000 priority was given to identifying pottery fragments of earlier prehistoric periods and separating them from the HBW of LH III C. The results indicate that Professor Rutter's criticisms were partly justified while partly our own views seem to prevail. The main points can be outlined as follows:

II.2.1

There was, indeed, a substantial amount of pottery and small finds of the Late Neolithic, the Final Neolithic or Chalcolithic period, of EH I and of EH III –MH I. This material is presented by E. Alram-Stern in a separate paper of this volume. Although no undisturbed habitation layers were identified, the prehistoric material makes it clear that the plateau was used for settlement purposes. There was, however, no settlement continuity. Between the periods of habitation, attested by the pottery finds, there seem to have been centuries when the hill appears to have not been inhabited. This may have been due to the fact that the site does not seem very favourable for settlement, particularly in view of the lack of water supply. Similarly to the situation in LH III C, the site was perhaps only sought out in times of unrest and insecurity.

II.2.2

The percentage of the prehistoric material is proportionally related to the depth of the deposit where it was found.

II.2.3

The layer mentioned previously as lying between the earliest Mycenaean floor and the floor level below contained, indeed, HBW together with prehistoric pottery but not a single Mycenaean sherd. Some HBW fragments from this location are shown in Fig. 7 and Fig 8.1–4; illustrations of prehistoric pottery fragments are presented by E. Alram-Stern in this volume.[13] On this evidence our earlier observations still appear as valid, and the presence of "Barbarian" pottery at Aigeira in contexts which predate the first LH III C Mycenaean settlement remains to be

[12] See Alram-Stern's paper in this volume, bibliography.

[13] Alram-Stern in this volume, figs. 12; 14; 17.c, f; 18.a, h.

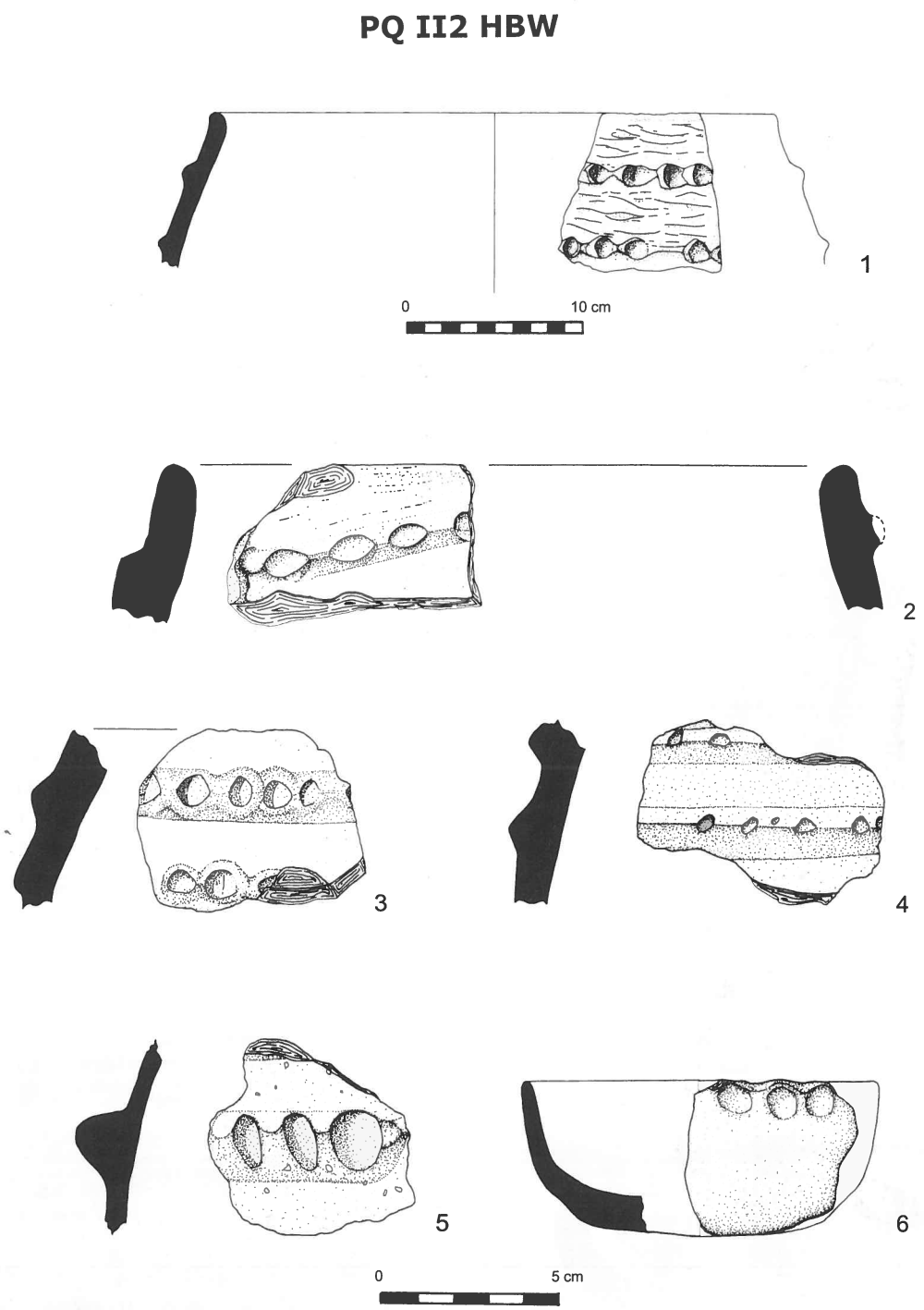

Fig. 7 HBW from pre-Mycenaean level in PQ II 2, find groups A 90/77 (6), A 149/77 (1, 4, 5), A 135/78 (2, 3). Drawings: M. Zavadil

accounted for. Considering the synchronisms between Aigeira I a and b with Lefkandi I b, and considering the fact that at Lefkandi HBW carinated bowls were confined to the first settlement of LH III C (Lefkandi I a, POPHAM and MILBURN 1971: 338 and fn. 8), it is perhaps no mere chance that HBW carinated bowls (cf. Fig. 8.5) were found at Aigeira in mixed fills of bedrock-fissures and in pre-Mycenaean layers. On the other hand it has to be admitted that it is no longer possible to speak in terms of a "HBW or Barbarian" level with reference to the small stretch of floor below the first Mycenaean level (see above). Since the deposit above this floor contains both prehistoric and HBW pottery, it cannot be assigned to a certain peri-

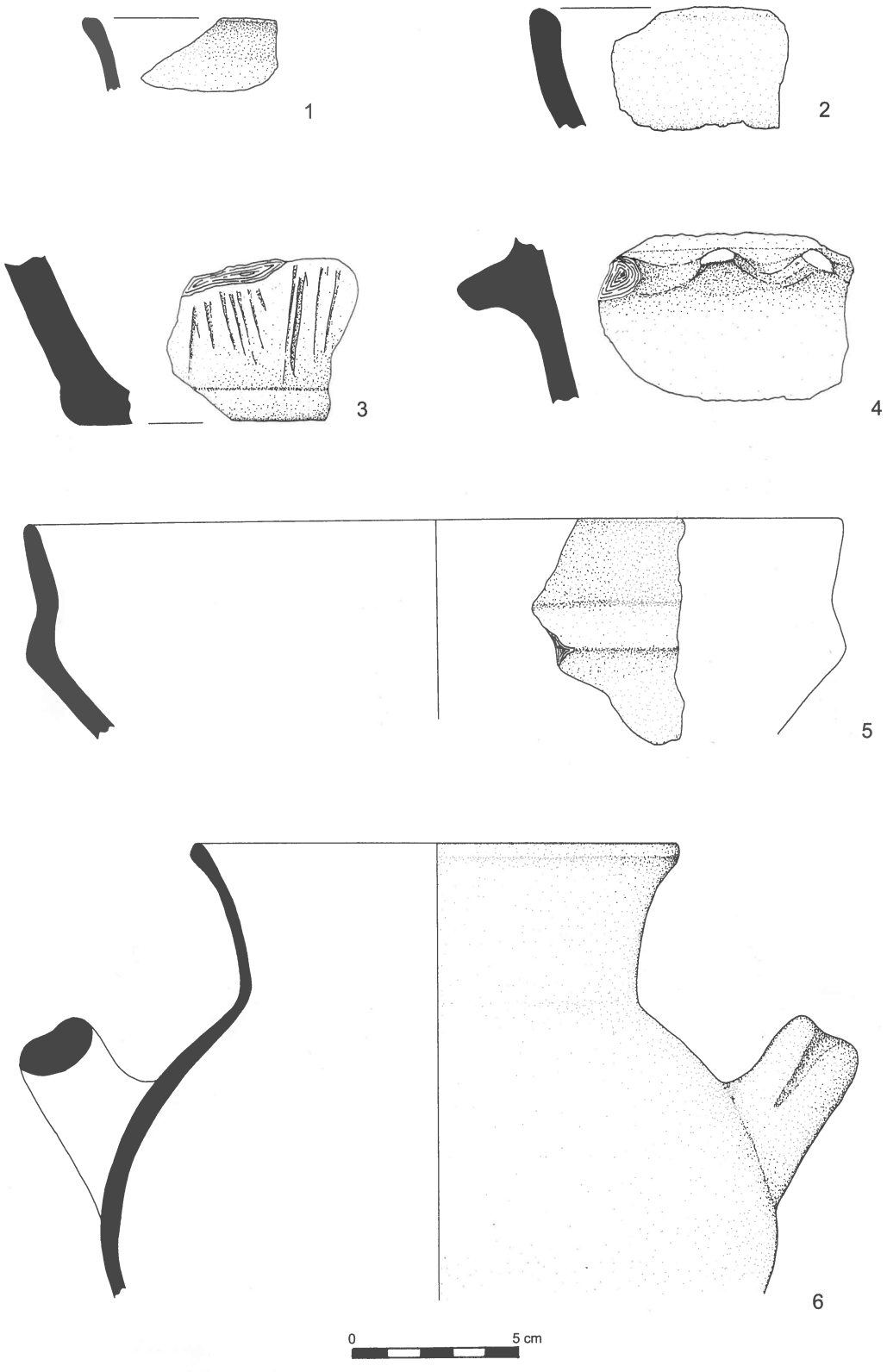

Fig. 8 HBW from pre-Mycenaean level, find groups A 149/77, A 135/78 (1 – 4). – Carinated bowl from pre-Mycenaean fill A 333/76 (5). – HBW imitation of Mycenaean shape A 247/80, Phase II (6). Drawings: M. Zavadil

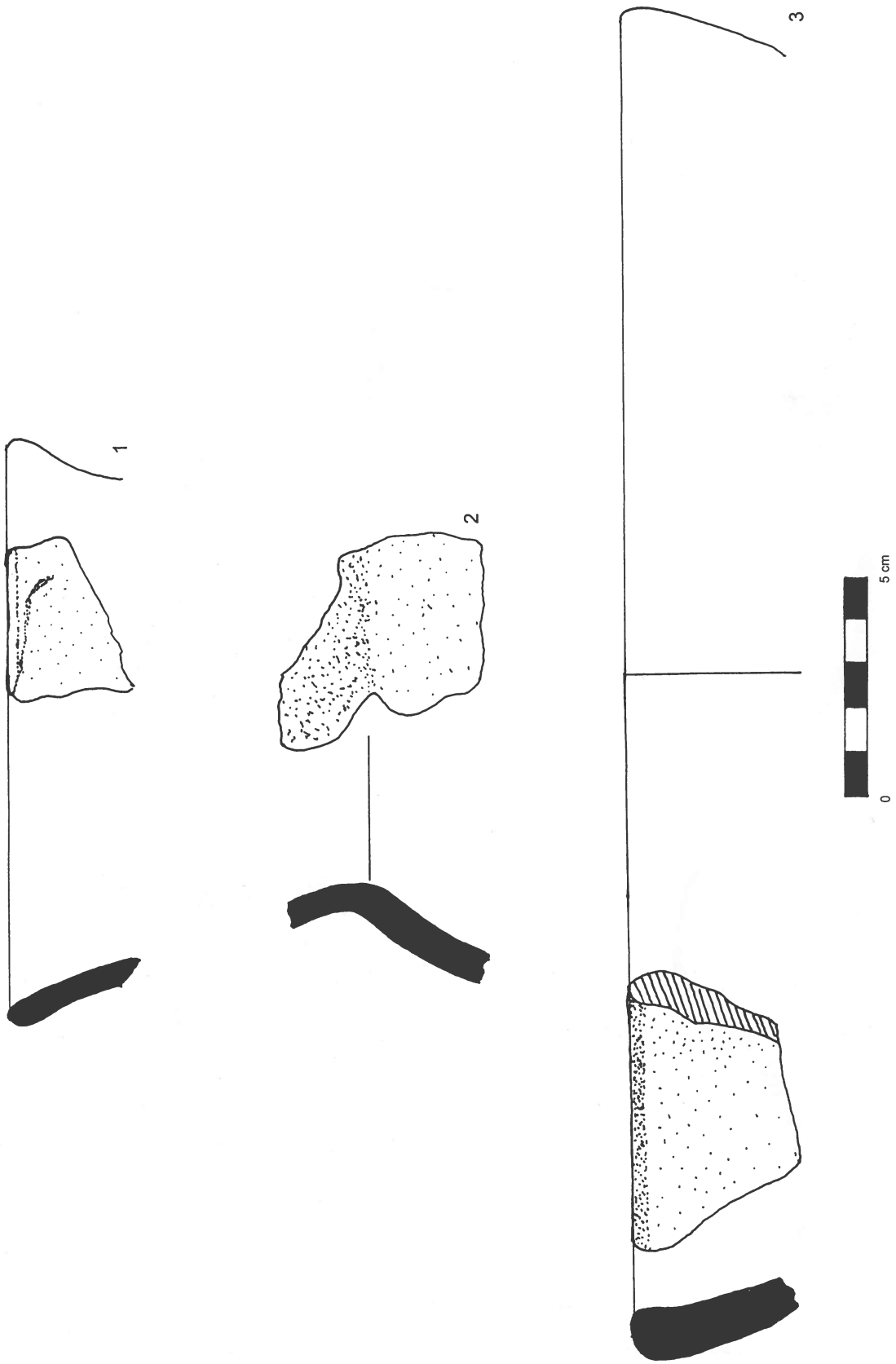

Fig. 9 HBW from Phase I b fireplace, find groups A 407/76, A 463/76. Drawings: S. Jalkotzy

od and is now referred to as "pre-Mycenaean" (see fig. 6 of E. ALRAM-STERN's paper in this volume).

II.2.4

Considering the small percentage of HBW vis-à-vis the Mycenaean pottery, the range of HBW shapes at Aigeira may be called comparatively wide. The majority consists of rim, bottom and handle fragments of jugs and two-handled closed jars (Figs. 3; 4; 8.1, 6; 9.1, 2), of large containers with incurving rims and plastic decoration (Fig. 7.1–5), and of bucket-like vessels with broad vertical loop-handles (DEGER-JALKOTZY 1977: 60 and Abb. 16; Abb. 14) or with grips in the shape of horizontal plastic applications (Fig. 8.4). Some large containers were decorated with Barbotine (Figs. 7.1; 8.3).[14] There are also small jars with plastic decoration and knob handles (Fig. 5; see also DEGER-JALKOTZY 1977: Tafel II.3 and Abb. 10), cups (for a coarse cup with a ring handle see DEGER-JALKOTZY 1977, Tafel III. 4 and Abb. 12), small semi-globular cups (Figs. 6; 7.6), carinated bowls (Fig. 8.5), large bowls with straight or slightly incurving rims (Figs. 8.2; 9.3). The object of Fig. 10 has the shape of a bird-protome and was once attached to a very small and shallow open receptacle. It may have been a spoon-handle.

The HBW finds from Aigeira will be presented *in extenso* in volume 4 of the final excavation report of Aigeira (see below, p. 469).

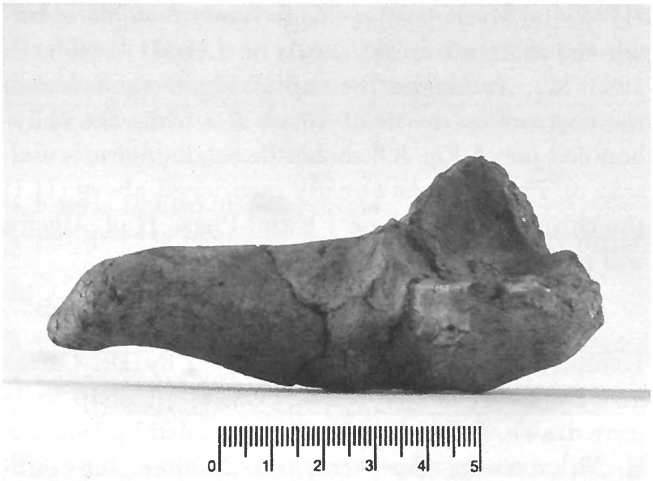

Fig. 10 HBW spoon-handle (?) with bird head E 48/78
Photogr.: K. V. von Eickstedt

II.2.5

Except for such pieces which can be securely identified as either HBW or as prehistoric pottery of an earlier date,[15] it is still difficult to tell the two groups apart. Shapes, decoration, surface treatment are often alike. It is moreover methodologically awkward that the great increase in publications of Neolithic and Early Helladic pottery has not been paralleled by new publications of HBW from LH III C contexts. This fact is particularly deplorable in the case of vessels decorated with plastic cordons and finger impressions, with horn-shaped handles, knob handles, lugs etc. It is now much easier to adduce prehistoric parallels than to refer to HBW material from other Greek sites. References to material from regions outside of the Aegean such as Troy VII b 1 or Southern Italy may appear as less convincing.

II.2.6

Study of HBW at Aigeira has been made even more difficult by the fact that prehistoric material was also found in Mycenaean LH III C levels. Of course such items can be explained in terms of kick-ups or residuals. However, it does appear strange when e. g. almost all clay spindle-whorls found in Mycenaean contexts have to be classified either as prehistoric or as Mycenaean. Some of them are clearly of EH or MH shape. Other cases are less obvious. It should be further noted that the quality of Mycenaean clay spindle-whorls differs considerably. Some are made of the well levigated clay used for Mycenaean pottery. Others resemble to HBW in fabric and surface treatment. Since no HBW spindle-whorls have been reported from elsewhere it is difficult to tell what they may have looked like. Clearly further investigation is required on this matter.

II.2.7

Under these circumstances it is not surprising that many fragments of handmade pottery have frequently changed places between Eva Alram-Stern and myself. We therefore turned to archaeometry for help. However, the mineralogical-petrographic analyses carried out by Roman Sauer and the Department of Archaeometry at the Vienna University of Applied Arts showed that all handmade pottery from

[14] For barbotine treatment of HBW surfaces see also KILIAN 1981: Abb. 21.15, 20.

[15] As a result of our reinvestigations several fragments were identified as prehistoric and removed from the list of HBW, cf. DEGER-JALKOTZY 1977: Abb. 6; Tafel 1.5; Tafel II.1 and Abb. 8; Tafel III.1; DEGER-JALKOTZY and ALRAM-STERN 1985: Abb. 13 bottom row left.

Aigeira, i.e. the pottery of all prehistoric periods, as well as the HBW, were made from the same raw material. Sauer describes it as "relatively rare compared to the common calcareous shale at Aigeira" and "therefore intentionally carefully selected for technological reasons" (on R. Sauer's report see below II.4.1). Sauer was able to identify a local clay bed at Aigeira as a source of this raw material (personal communication).

II.2.8

While the archaeometrical analyses have been able to explain why it is so difficult to separate the HBW from Neolithic, EH and MH pottery, they have also helped to settle another question. Since HBW differs in every respect from Mycenaean pottery, its foreign origin has already been postulated by RUTTER 1975. However, it is still a matter of scholarly dispute whether this material was imported or made by immigrants. As far as Aigeira is concerned, it is now certain that HBW was made locally, as was already postulated by DEGER-JALKOTZY 1977. From this it may be concluded that it was made by a non-Mycenaean population element among the inhabitants of Aigeira, most probably immigrants from a region (or regions) outside of the Mycenaean sphere. Since it is not possible to enter here into this complex matter, it may suffice to mention that the origins of those immigrants have been sought in the regions along both sides of the Adriatic, in the Balkans north of Greece or in SE-Europe. The present state of discussion has been summarized by PILIDES 1994. It should also be noted that the "Coarse Ware" of Troy VII b 1 (on the date of Troy VII b 1 see now MOUNTJOY 1999b) and the HBW from LC III A sites of Cyprus (PILIDES 1994) were equally alien to those areas where they appeared at the same time as in Greece in LH III C Early. A common historical background seems plausible, although the picture designed in DEGER-JALKOTZY 1977 will require some modifications according to the new state of research into the end of the Late Bronze Age in Italy and SE Europe.

II.2.9

Except for Mycenae (FRENCH 1989: 44f.) and Tiryns (KILIAN 1981: 170, 180; KILIAN 1985: 81) where HBW has been reported to have occurred in LH III B 2 before the destruction of the palaces, and for Crete (see above, II.2) the occurrence of HBW seems to be chronologically indicative of LH III C Early on the Greek Mainland and Euboea. This has again been confirmed by the new finds of HBW in LH III C Early contexts at Dimini.[16] Studies on synchronisms between LH III C sites of Greece and the Aegean may therefore also include the occurrence of HBW.

II.2.10

As already observed by RUTTER 1975: 32 and further elaborated by KILIAN e. g. 1985: fig. 14; 1988; fig. 6 some features of HBW pottery were adopted by the makers of Mycenaean fine pottery (the most well-known features being the carinated cup FS 240 and the plastic incised cordons below crater rims of LH III C Advanced), as well as of Mycenaean kitchen ware (plastic cordons, lugs, knobs). Conversely Mycenaean shapes were imitated in HBW. At Tiryns HBW versions of shapes like pyxis, amphora with cylindrical neck and jugs were found (KILIAN 1981: 180f.; see also PILIDES 1994: fig. 8). At Aigeira, too, such imitations have been observed of which the spouted semiglobural cup of Fig. 6 is an example. The belly-handled amphora-like jar with slightly flaring neck of Fig. 8.6 was moreover thrown on the slow wheel while its fabric and surface treatment correspond to HBW. According to RUTTER and KILIAN the convergence between Mycenaean wares and HBW may indicate an assimilation process by which the makers of HBW were eventually integrated into the Mycenaean civilization. This view was shared by DEGER-JALKOTZY 1977. At Tiryns the process of imitation between HBW and Mycenaean seems to have taken place during the more advanced stages of LH III C (KILIAN 1985: 82). At Aigeira the cup of Fig. 6 was found in the destruction debris of Phase I b, while the belly-handled jar of Fig. 8.6 should be attributed to a context of Phase II. As already mentioned above (II.1) the chronology of Phase I b and Phase II of Aigeira will probably require some modifications.

II. 3 Small Finds

Except for the find material studied by Dr. Carter and Dr. Labriola (see below, IV.3, 4) all small finds were drawn, documented and catalogued by Doz. Dr. E. Alram-Stern. The terracotta figurines were published by her in 1987 (E. ALRAM-STERN 1987).

II. 4 Cooperations

One of the great opportunities offered by SCIEM 2000 consists in the facilitation of interdisciplinary

[16] I would like to thank Dr. V. Adrimi-Sismani for this information.

cooperations both within the SFB and with scholars from abroad. All colleagues who have co-operated with the "End of the Mycenaean Civilization" project have submitted reports on their work of which short versions are given here. The final reports will be included in the Aigeira excavation report (see below, p. 469).

II.4.1 Archaeometry

As has already been mentioned (II.2.7) samples of HBW and prehistoric pottery from Aigeira were analysed by Roman Sauer and the Department of Archaeometry at the University of Applied Arts at Vienna. Dr. Sauer reports:

Samples of Bronze Age pottery ("Barbarian ware"), and a few samples of Neolithic common ware as well as Mycenaean ware have been studied. Additionally also the potential local ceramic raw materials were explored, partly already analysed and compared with the investigated pottery. All samples were studied by both petrographical thin section analyses and heavy mineral analyses. Based on these investigations the "Barbarian ware" and the Neolithic pottery were divided into 6 different fabrics.

Fabric A: is the most common fabric and occurs in both Barbarian ware and Neolithic pottery. It is (most likely) of local origin. However, the raw materials used are relatively rare in comparison to the common calcareous shale at Aigeira and can therefore be considered as intentionally carefully selected (technological reasons). No differentiation between Barbarian ware and Neolithic pottery is possible based on archaeometrical analyses alone.

Besides fabric A, further, but by far less common fabrics could be identified.

- Fabric B: also of local origin
- Fabric C: is higher fired and shows a totally different heavy mineral composition and has to be considered to have been imported
- Fabric D: possibly local
- Fabric E: import (possibly from Corinth)[17]
- Fabric F: questionable (local or imported)[18]

The analyses of the local raw materials and of Mycenaean ware have not yet been fully completed.

However, the simultaneous usage of two different local raw materials for the production of "Barbarian ware" and prehistoric pottery and the Mycenaean kitchen ware" is remarkable.

II.4.2 Matt impressions

Five matt impressions found at Aigeira (see also E. Alram-Stern's paper in this volume) were studied by Laura Labriola (Philadelphia). Three of those date to Final Neolithic and EH, one dates to LH III C. One fragment of floor matting was unfortunately found in a disturbed area and cannot be dated.

II.4.3 Chipped stone objects

Tristan Carter (Bryn Mawr) gave a report on his investigations of the chipped stone objects: He identified obsidian blades, flakes and tools as well as a radiolarite sickle blade dating to the Neolithic and Early Bronze Age periods. Three pieces were recovered from Mycenaean contexts. They were in all probability residuals.

A shaft-hole axe dates to the EH III/MH period (see also E. Alram-Stern's paper in this volume).

II.4.4 ^{14}C dating

Cooperation with Project 5.8 of SCIEM 2000 allowed us to submit 8 samples of charcoal, carbonized grains, and fruits for radicarbon dating to the VERA laboratory directed by Professor Walter Kutschera at Vienna. On behalf of Project 5.8 of SCIEM 2000 Peter Stadler gave the following report:

The samples were characterized by two botanists, Michaela Popovtschak for the fruits and Wolfgang Gindl for charcoal samples from wooden material. With the radiocarbon dates, at first a group calibration was performed. The time span covered by the samples is within the 1-σ-probability from 1300 to 1050 B.C. As all samples probably came from one destruction layer, in the next step we carried out a combination calibration which is only useful if all the measured dates come from one single event. This should be the case with one layer of destruction.

Fig. 11 presents this calibration. The X^2-Test succeeds, thus all the samples really could have come from the same event. The weighed average of the 8 samples is uncalibrated 2967 plus/minus 16 years BP. In the calibration result (under the black filled curve)

[17] Without Dr. Sauer's knowledge the samples also included a fragment of post-Mycenaean coarse ware. The analysis promptly testified that the fabric of this piece was different from prehistoric and HBW pottery.

[18] This sample, too, was not prehistoric pottery nor HBW. It was a fragment of Mycenaean kitchen ware.

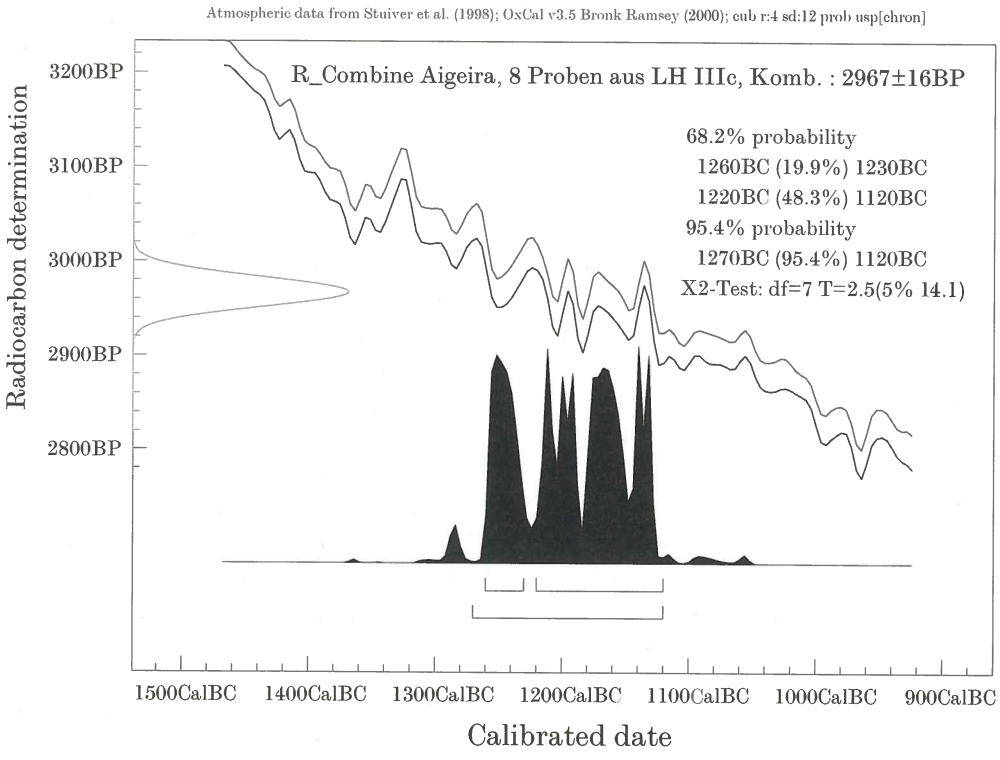

Fig. 11 Combination calibration of 8 samples from Aigeira by P. Stadler

we mainly see 4 peeks, between 1260 and 1230 and between 1220 to 1120 B. C., again on the 1-σ-level.

Thus the date of the event could be narrowed down most probably to the end of the 13th and 12th centuries B.C. However, in reality only one of the four peaks could be the solution. Which peek is the right solution cannot be decided with these measurements. A decision would only be possible by tree ring wiggle matching, for which, at the time, the samples are not available".

Since we are dealing with a LH III C site, only the second chronological framework of 1220 to 1120 B.C. can be applied to Phase I b of Aigeira. However, the calibration curve exhibits 3 peeks for this time span. Under these premises the destruction at the end of Phase I b cannot be dated with more precision within the 12th century B.C. The lowest possible date seems to be 1120 B.C. which would appear as too low for the present dating of Phase I b in LH III C Early.

II.4.5 Animal Remains

Professor Dr. Gerhard Forstenpointner and Dr. Gerald Weissengruber of the University of Veterinary Medicine at Vienna studied a small group of datable animal bones found during the excavations of 1975–1981. Since the data basis for studies into Mycenaean stockbreeding and subsistence economy is in general still very small, the evidence from Aigeira can be regarded as a valuable widening of evidence. According to Prof. Forstenpointner sheep and goats dominate by 60% under the animal species identified at Aigeira. Pig and cattle by 15% each also appear to have been of some economic importance. All domestic animals found in Mycenaean contexts are of strikingly small size. The predominance of sheep and goat is only paralleled by the late Mycenaean finds from Midea in the Argolid, even if at Nichoria, Pylos and Tiryns a similar numerical increase of these animals took place towards the end of the Mycenaean period. The small size of domestic animals, too, has been reported from other Mycenaean sites.

Several finds of bones and antlers were identified as prehistoric tools by Felix Lang (Institute of Classical Archaeology, University of Salzburg).

II.4.6 Plant Remains

Carbonized plant remains from Aigeira were analyzed in 1977 by R. Schachl and K. Kollmann of the Landwirtschaftliche Versuchsstation at Linz. In the course of the VERA laboratory analyses some more samples were botanically investigated (above II.4.4). Most of the material was collected from the storage areas and storage jars found in the destruction debris

of Phase I b. The plant remains were identified as cereals *(triticum dicoccum, hordeum vulgare var. polystichon)*, legumes *(vicia faba* and other subspecies of *vicia,* as well as *vicia ervilia)*, and beans. They were in all probability destined for human consumption, with the exception perhaps of the toxic *vicia ervilia* which in antiquity was used for poultry feed. According to Schachl-Kollmann the grains and seeds were of high quality, well sorted according to size, and clean of weeds. The evidence points to a high standard of agricultural knowledge in 12th century B. C. Aigeira.

II.5. The Publication of the Report on the Excavations on the "Acropolis" of Aigeira

The organization of the final excavation report was discussed and agreed upon with the director of the Austrian Archaeological Institute Prof. Dr. Fritz Krinzinger and with Dr. Georg Ladstätter who is the new director of the excavations at Aigeira. The 1975–1981 excavations of the "acropolis" of Aigeira will be published in *four volumes.*

Volume 1 will contain the settlement remains and stratigraphy of the plateau on top of the hill for publication. The Mycenaean evidence will be published by E. Alram-Stern, the post-Mycenaean remains G. Ladstätter.

Volume 2: The Mycenaean pottery found on the plateau will be published by S. Deger-Jalkotzy.

Volume 3 will contain the evidence of prehistoric, Mycenaean and post-Mycenaean discoveries made on the terraces below the plateau. It is planned that G. Ladstätter and E. Alram-Stern will be responsible for this volume.

Volume 4 will contain all materials presented by the present work in progress report, with the exception of the Mycenaean pottery: Prehistoric pottery, Handmade Burnished Ware, mat impressions, small finds, chipped stone objects, animal remains, plant remains, ^{14}C dating, mineralogical-petrographic pottery analyses of the handmade wares.

It is expected that volume 4 will be published during the next phase of SCIEM 2000 in 2002–2005.

Bibliography

ALRAM-STERN, E.

1987 Die mykenischen Idole von Aigeira, 4–7, in: *Akten des 2. Österreichischen Archäologentages Schloß Seggau bei Leibnitz 1985*, Mitteilungen der Archäologischen Gesellschaft Graz, Beiheft 1, Graz.

ALZINGER, W. und Mitarbeiter

1985 Aigeira-Hyperesia und die Siedlung Phelloe. Österreichische Ausgrabungen auf der Peloponnes 1972–1983, *Klio* 67, 389–451.

DEGER-JALKOTZY, S.

1977 *Fremde Zuwanderer im spätmykenischen Griechenland,* Wien.

1991 Zum Verlauf der Periode SH III C in Achaia, 19–29, in: RIZAKIS, A.D., (ed.), *Achaia und Elis in der Antike.* Akten des 1. Internationalen Symposiums Athen, 19.–21. Mai 1989, Athen.

DEGER-JALKOTZY, S. and ALRAM-STERN, E.

1985 *Akropolis,* 393–426, in: ALZINGER und Mitarbeiter 1985.

FRENCH, E. B.

1969 The first phase of LH III C, *AA*, 133–36.

1998 The Ups and Downs of Mycenae: 1250 – 1150 B. C., 2–5, in: GITIN, S., MAZAR, A., and STERN, E. (eds.), *Mediterranean Peoples in Transition. Thirteenth to Early Tenth Centuries BCE*, In Honour of Professor Trude Dothan, Jerusalem.

1989 Possible Northern Intrusions at Mycenae, 39–51, in: BEST, J. and DE VRIES, N. (eds.), *Thracians and Mycenaeans.* Leiden.

FURUMARK A.

1941 *Chronology of Mycenaean Pottery*, Stockholm.

IACOVIDES, SP.

1969–70 *Perati. To Nekrotafion.* Vol. I – III, Athens.

2003 LH III C at Mycenae, 117–124, in: S. DERGER-JALKOTZY and M. ZAVADIL (eds.), *LH III C Chronology and Synchronisms. Proceedings of the International Workshop held at the Austrian Academy of Sciences at Vienna, May 7th and 8th 2001,* Vienna.

KILIAN, K. *et al.*

1981 Ausgrabungen in Tiryns 1978, 1979, *AA*, 149–256.

1985 La caduta dei palazzi Micenei continentali: aspetti archeologici, 73–95, in: MUSTI, D. (ed.), *Le origini dei Greci: Dori e mondo egeo,* Roma.

1988 Ausgrabungen in Tiryns 1982/83. Bericht zu den Grabungen, *AA*, 105–151.

KOLONAS, L.

1998 Neoteri mikenaiki topographia tis Achaias, 468–496, in: Praktika tou E' diethnous sinedriou Peloponnisiakon spoudon (Argos 1995) tomos B, Athens.

MOUNTJOY, P.A.

1986 *Mycenaean Decorated Pottery. A Guide to Identification,* Göteborg.

1999a *Regional Mycenaean Decorated Pottery,* Rahden/Westfalen.

1999b Troia VII reconsidered, *Studia Troica* 9, 295–346.

PAPADIMITRIOU, A.

1988 Bericht zur früheisenzeitlichen Keramik aus der Unterburg von Tiryns. Ausgrabungen in Tiryns 1982/83, *AA*, 227–243.

PAPADOPOULOS, TH.J.

1978 *Mycenaean Achaea*, Part 2: Figures, Göteborg.

1979 *Mycenaean Achaea*, Part 1: Text, Göteborg.

PAPAZOGLOU-MANIOUDAKI, L.

1994 A Mycenaean Warrior's Tomb at Krini near Patras, *ABSA* 89, 171–200.

PILIDES, D.

1994 Handmade Burnished Wares of the Late Bronze Age in Cyprus, Jonsered.

PODZUWEIT, CHR.

1983 Bericht zur spätmykenischen Keramik. Ausgrabungen Tiryns 1981, *AA*, 359–401.

1988 Keramik der Phase SH III Spät aus der Unterburg von Tiryns. Ausgrabungen in Tiryns 1982/83, *AA*, 213–225.

POPHAM, M. and MILBURN, E.

1971 The Late Helladic III C Pottery of Xeropolis (Lefkandi). A Summary, *ABSA* 66, 333–349.

RUTTER, J.B.

1974 *The Late Helladic III B and III C Periods at Korakou and Gonia in the Corinthia* (Diss. Univ. Pennsylvania), Univ. Microfilms Ann Arbor.

1975 Ceramic Evidence for Northern Intruders in Southern Greece at the Beginning of the Late Helladic III C Period, *AJA* 79, 17–32.

1977 Late Helladic III C Pottery and some Historical Implications, 1–20, in: DAVIS, E. N., PITTMANN H. (eds.), *Symposium on the Dark Ages in Greece*, New York.

1990 Some Comments on Interpreting the Dark-Surfaced Handmade Burnished Pottery of the 13th and 12th centur. B. C., *Journal of Mediterranean Studies* 3, 29–49.

SCHACHERMEYR, F.

1980 *Die ägäische Frühzeit IV: Griechenland im Zeitalter der Wanderungen. Vom Ende der mykenischen Ära bis auf die Dorier*, Wien.

SCHWARZ, G.

1986 Geometrische, archaische und klassische Keramik von der Akropolis, in: W. ALZINGER *und Mitarbeiter*, Aigeira-Hyperesia und die Siedlung Phelloe in Achaia (III), *Klio* 68, 326–345.